

## A new clearwing moth of the genus *Macroscylesia* HAMPSON, 1919 from Java, Indonesia (Lepidoptera: Sesiidae)

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**Abstract:** A new species of the tribe Melittiini from Java, Indonesia, is described. *Macroscylesia aritai* spec. nov. is the only known species of the genus occurring on the Sunda Islands. The species is characterized by large transparent areas and the shape of the discal spot of the forewing. It is compared to *Macroscylesia elaea* (HAMPSON, 1919) comb. nov., *M. owadai* ARITA & GORBUNOV, 2000, and *M. diaphana* GORBUNOV & ARITA, 1995.

**Key words:** Melittiini, *Macroscylesia aritai* spec. nov., *M. elaea* (HAMPSON, 1919) comb. nov., Java

### Eine neue Glasflüglerart der Gattung *Macroscylesia* HAMPSON, 1919 aus Java, Indonesien (Lepidoptera, Sesiidae)

**Zusammenfassung:** Aus der Tribus Melittiini wird eine neue Art von der Insel Java, Indonesien, beschrieben. *Macroscylesia aritai* spec. nov. ist der einzig bekannte Vertreter der Gattung im gesamten Sundaarchipel. Die Art zeichnet sich durch die großen Glasfelder und die Form des Diskalflecks im Vorderflügel aus. Sie wird mit *Macroscylesia elaea* (HAMPSON, 1919) comb. nov., *M. owadai* ARITA & GORBUNOV, 2000 und *M. diaphana* GORBUNOV & ARITA, 1995 verglichen.

## Introduction

The genus *Macroscylesia* is a comparatively small and, as far as presently known, strictly Oriental genus of the clearwing moths tribe Melittiini. It was reviewed by GORBUNOV & ARITA (1995), when the authors listed two species from Japan and China and named another one from Vietnam. Later these authors described another two species of the genus from Vietnam (ARITA & GORBUNOV 2000). Here we can report the finding of a new species from Java. Two specimens, together with additional clearwing moths from the same region, were obtained by the junior author from an old private collection. The new species represents the first record of the genus for the entire Sunda Islands archipelago.

Additionally, we provide a new combination for *Melittia elaea* HAMPSON, 1919 from Khasis, which is here transferred to *Macroscylesia* (comb. nov.) on the basis of external characters (small size, shape of the transparent areas of the forewing, extremely long hind legs). Finally *Macroscylesia diaphana* GORBUNOV & ARITA, 1995 is reported from Cambodia for the first time. These data extend the known distribution of the genus from north-eastern India across the South East Asian mainland and Japan to the Island of Java.

### *Macroscylesia* HAMPSON, 1919

*Macroscylesia* HAMPSON, 1919: 84; type species: *M. longipes* MOORE, 1877, by original designation.

### *Macroscylesia aritai* spec. nov. (Figs. 1, 2, 3)

**Holotype:** ♂, "Kletak – Tengger [Eastern Java, Tengger Mts.], 6000', XI. 1932, A. M. R. WEGNER", "genitalia examined by A. KALLIES, prep. No. AK172" (coll. A. KALLIES, will be transferred to Museum für Naturkunde, Zentralinstitut der Humboldt-Universität, Berlin, Germany).

**Paratype:** 1 ♀, "Nongkodjadar, 4000 ft., x. 1937, A. M. R. WEGNER" (coll. T. & W. GARREVOET).

**Etymology:** The new species is named after Prof. Yutaka ARITA, Meijo University, Nagoya, Japan, a well known specialist of the Oriental Melittiini fauna, who supported the studies on Oriental Sesiodea of the senior author.

**Additional material** examined for comparison: *M. diaphana*: 1 ♂, [Vietnam] Moabinh (Tonkin), v. [19]31, DE COA-NEUA (coll. T. & W. GARREVOET); 1 ♂, Cambodia, Cardamon Mts. near Pramuoy village, 12°16'N, 103°01'E, 270 m, Dry Dipterocarp and Gallery Forest, 24.–25. II. 2000, leg. M. NUSS (coll. A. KALLIES); *M. elaea*: holotype ♂, [NE India], Khasis (coll. The Natural History Museum, London, U.K.).

## Description

♂ (holotype, fig. 1). Alar expanse 24 mm, forewing length 11 mm, body length 12 mm. Head: antenna ciliate, brown with single white scales dorsally; basal joint of labial palpus whitish yellow with some black scales, mid and apical joint brown with individual yellow and white scales; vertex ochre and brown, with white scales just before scapus; frons grey to brown, white laterally. Thorax: blackish brown; metathorax with few white scales dorsally and yellow hair-like scales submedially; patagia black, mixed with bronze-brown scales. Legs: fore leg bronze-brown and yellow dorsally, deep yellow ventrally; fore coxa yellow, whitish basally; mid and hind coxae grey mixed with white (remaining parts of mid leg broken off); hind femur and tibia with long tufted bronze-brown scales, mixed with single yellow and white scales; with distinct white spots in middle part of femur and tibia ventrally; tibial spurs brown, long-scaled dorsally, yellow, short-scaled ventrally; hind tarsus with basal tarsomer brown dorsally, remaining tarsomers yellow-brown dorsally, yellow and brown mixed throughout ventrally. Abdomen: tergites bronze-brown to black dorsally; tergite 1 with black posterior margin; tergite 2 with a row of long hair-like yellow scales at lateral margin; tergites 2–7 with ochre-yellow posterior margins; sternites yellow, proximal sternites pale; anal tuft blackish brown, yellow apically. Forewing: transparent almost throughout; veins blackish brown; apical area reduced to a narrow margin; discal spot narrow with a short projection into the anterior transparent area; fringe blackish brown. Hindwing: transparent, anal area weakly



Figs. 1–2: *Macrosclelesia aritai* spec. nov., Java. Fig. 1: ♂, holotype. Fig. 2: ♀, paratype.

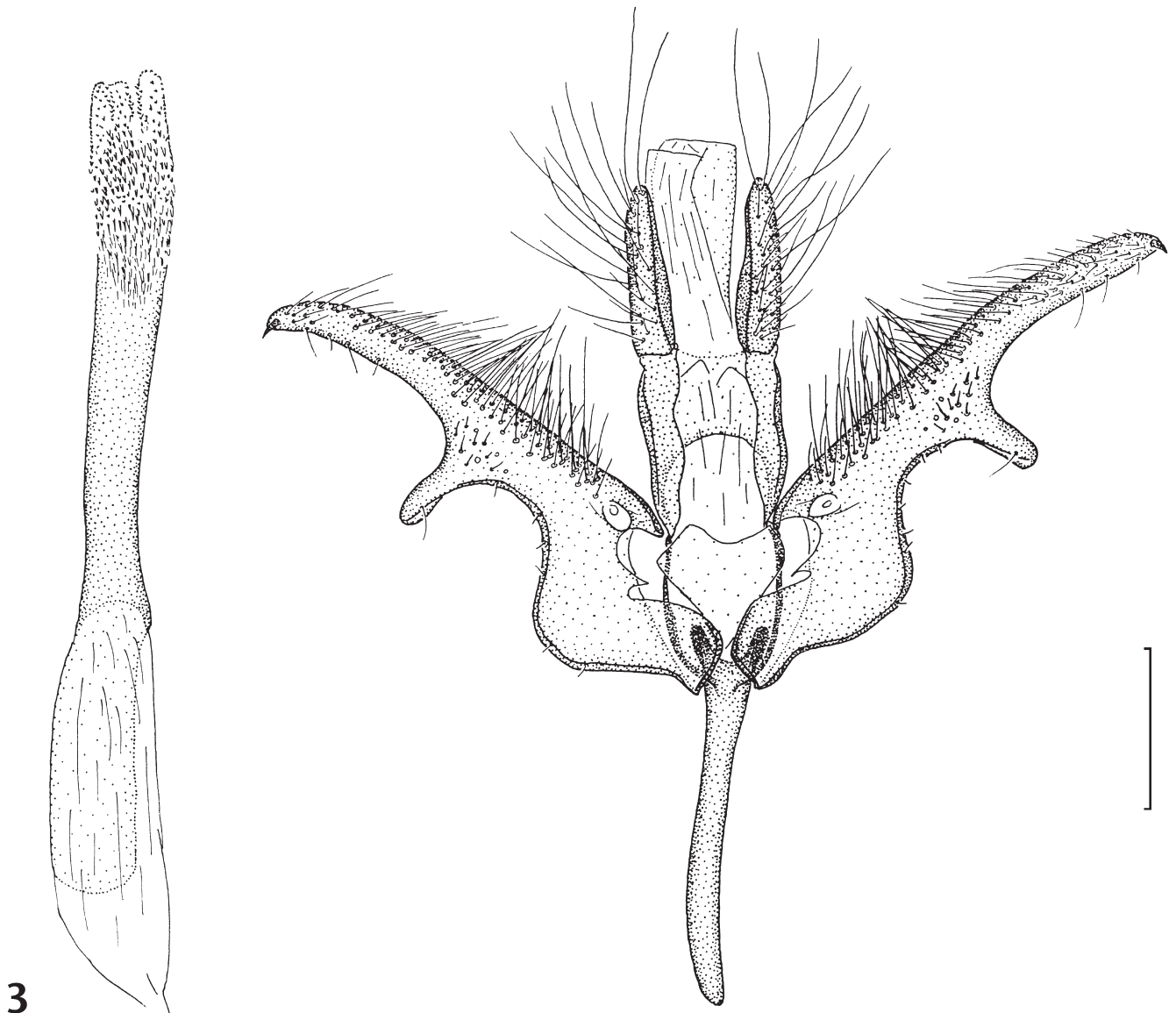


Fig. 3: *Macrosclelesia aritai* spec. nov., Java, ♂ genitalia (holotype), scale bar: 0.5 mm.

scaled; discal spot not developed; fringe blackish brown, white in anal area.

♂ **genitalia** (prep. No AK172, fig. 3). Typical for the species of the genus (compare ARITA & GORBUNOV 1995). Tegumen-uncus complex small, uncus portion relatively long; valva with a single strong thorn apically and a finger-shaped extension on the ventral margin; saccus long and narrow; aedaeagus relatively broad, about 1.3 times as long as valva, vesica with small cornuti.

♀ (paratype, fig. 2). Alar expanse 27 mm, forewing length 12.5 mm, body length 13 mm. Similar to male, but apical area of forewing broader, almost reaching joint of R4 and R5 scattered with single white scales; frons blackish, white before the eyes.

### Diagnosis

The morphology of the male genitalia among the species of *Macrosclesia* is very homogeneous. They best can be differentiated by external characters.

By the well developed transparent areas of the forewing the new species is similar to *Macrosclesia diaphana* GORBUNOV & ARITA, 1995, *Macrosclesia elaea* (HAMPSON, 1919) comb. nov., and *M. owadai* ARITA & GORBUNOV, 2000. *M. diaphana* differs by the larger size (alar expanse in ♂♂ about 28 mm), the shape of the discal spot (narrow without a projection into the anterior transparent area), and the olive-brown colour of the body. *M. elaea* can be distinguished mainly by the coloration of the body (abdomen blue to black with rufous distal margins dorsally, rufous ventrally; hind tibia black-brown with

reddish and white scales) and by the broader discal spot. *M. owadai* is similar to *M. aritai* in the main coloration, but differs in the size of the discal spot of the forewing (about two times broader), the colour of the labial palps (pale cream ventrally), and details of the shape of the ♂ genitalia (saccus pointed apically, inversion of ventral margin between sacculus and processus broader).

### Bionomics

The two known specimens were collected in a mountain area at altitudes between 1300 and 2000 m in the beginning of the rainy season. The hostplant is unknown.

### Acknowledgements

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